

CLAIMS

I claim:

1. A method for facilitating communications between components of a distributed application comprising the steps of:
receiving a request from a first distributed application component, wherein a recipient of said request is a second distributed application component; and
publishing said request on a first publish/subscribe request topic, wherein said first publish/subscribe topic is identified by a first property of said second distributed application component.
2. The method of claim 1, wherein said first property is a type of said second distributed application component.
3. The method of claim 2, wherein said recipient is identified by a second property of said second distributed application component included within said request.
4. The method of claim 3, wherein said second property is a unique identifier of said second distributed application component.
5. The method of claim 2, further comprising the steps of:
subscribing to a first publish/subscribe reply topic, wherein said first publish/subscribe reply topic is identified by a type of said first distributed application component;
forwarding a reply posted on said first publish/subscribe reply topic to said first distributed application component.
6. The method of claim 5, wherein said reply is generated by said second distributed application component in response to said request.
7. The method of claim 1, further comprising the steps of:

subscribing to a second publish/subscribe request topic, wherein said second publish/subscribe request topic is identified by a type of said first distributed application component;

forwarding a request posted on said second publish/subscribe request topic to said first distributed application component, wherein said request is generated by a third distributed application component;

receiving a reply from said first distributed application component, wherein a recipient of said reply is said third distributed application component; and

publishing said reply on a second publish/subscribe reply topic, wherein said second publish/subscribe reply topic is identified by a type of said third distributed application component.

8. The method of claim 7, wherein said second and third distributed application components are the same distributed application component.

9. The method of claim 7, further comprising the step of, prior to forwarding said request posted on said second publish/subscribe request topic,
identifying that a recipient of said request posted on said second publish/subscribe request topic is either said first distributed application component or all distributed application components.

10. The method of claim 7, further comprising the step of,
sending a callback object to said first distributed application component with said request posted on said second publish/subscribe request topic.

11. The method of claim 1, further comprising the step of,
registering said first applicant component prior to receiving said request,
wherein said step of registering comprises:

receiving a type of said first distributed application component, a name of said first distributed application component, a list of all other types of distributed application components that will send request or replies to said first distributed

application component, and a list of all other types of distributed application components that will be receiving requests or replies from said first application.

12. The method of claim 11, wherein said step of registering further comprises:
receiving a callback object, wherein said callback object directs requests from other distributed application components to said first distributed application component.
13. The method of claim 12, further comprising the step of,
invoking said callback object to deliver said request to said first distributed application component.
14. The method of claim 11, wherein said step of registering further comprises:
sending a callback object to said first distributed application component.
15. The method of claim 11, wherein said step of registering further comprises:
creating a publisher on a publish/subscribe request topic of each of said other type of distributed application component receiving a request from said first distributed application component;
creating a publisher on a publish/subscribe reply topic of each of said other type of distributed application component types receiving a reply from said first distributed application component;
creating a subscription on a publish/subscribe request topic of said type of said first distributed application component; and
creating a subscription on a publish/subscribe reply topic of said type of said first distributed application component.
16. The method of claim 15, wherein said subscription on a publish/subscribe request topic of said type of said first distributed application component includes a filter that only accepts requests addressed to said first distributed application component or all distributed application components.

17. The method of claim 15, wherein said subscription on a publish/subscribe reply topic of said type of said first distributed application component includes a filter that only accepts replies addressed to said first distributed application component.

18. The method of claim 1, wherein said request comprises one or more instructions directed toward a task to be performed by said second distributed application component.

19. A system for facilitating request/reply communications among components of a distributed application comprising:
- a publish/subscribe request topic for every type of distributed application component;
 - a publish/subscribe reply topic for every type of distributed application component; and for each distributed application component,
 - a publisher on every publish/subscribe request topic within a portion of said publish/subscribe request topics;
 - a publisher on every publish/subscribe request topic within a portion of said publish/subscribe reply topics;
 - a subscription on the publish/subscribe request topic pertaining to a type of said distributed application component; and
 - a subscription on the publish/subscribe reply topic pertaining to a type of said distributed application component.
20. The system of claim 19, wherein said portion of said publish/subscribe request topics includes publish/subscribe request topics pertaining to all types of distributed application components that receive requests from said distributed application component.
21. The system of claim 19, wherein said portion of said publish/subscribe reply topics includes publish/subscribe reply topics pertaining to all types of distributed application components that receive replies from said distributed application component.
22. The system of claim 19, further comprising:
- one or more callback objects to facilitate delivery of requests and replies between said distributed application components and said publishers or subscriptions.
23. The system of claim 22, further comprising:
- routing logic to route a request or reply to a particular callback object.

24. A method of communicating messages between components of a distributed application comprising the steps of:

receiving a message formulated according to request/reply semantics from a first distributed application component;
translating said message into publish/subscribe communications implemented by a publish/subscribe middleware program; and
forwarding said translated message to a second distributed application component.

25. The method of claim 24, wherein said message is a request or reply.